Institutional Determinants Of Foreign Direct Investment In MENA Region: Panel Co-Integration Analysis

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ABSTRACT

This study examines the impact of institutional Determinants of Foreign Direct Investment (FDI) inflows in MENA (Middle East and North Africa) region during the period 1984-2011. Using panel data techniques by considering two hypotheses of economic interdependencies and structural changes, it is found that the macro determinants like openness, growth rate, exchange rate, and economic instability, and institutional indicators like government stability, investment profile, rule of law, internal and external conflict, have a long-run effect on attracting FDI inflows.

Keywords: Foreign Direct Investment; Institutions Indicators; Interdependencies and Structural Changes; Panel Co-Integration Analysis

INTRODUCTION

Since the late 1980s, much research has tackled economic development, taking into account the institutions' quality to account for the divergences in growth rates between countries and GDP per capital. As a matter of fact, there would be greater prosperity when the civil rights are effectively protected and when there is much political and economic freedom. This has increased interest in foreign direct investment (FDI), which is among the most durable constituents of capital flows into developing countries and represents a guarantee of progress through the use and extension of FDI. Such investment is nowadays of great importance in forming fixed capital in emerging economies given that developing FDI through better institutions could be an effective way to accelerate growth and development. When the institutions in the host country are stable and not threatened by political uncertainties, they will woo capital holders looking for investment. Quere et al. (2007) can be cited as an example. They put forward three main reasons, explaining how the institutions' quality attracts FDI. First of all, high productivity, good governance and decent infrastructure allure foreign investors. Second, weak organizations represent a burden for FDI; namely, when there is corruption. Finally, FDI is affected by all types of uncertainties, such as low government effectiveness, policy changes, and weak enforcement of property rights and the general legal system.

When considering the FDI flow, it is clear that the Middle East and North Africa (MENA) are a paradox due to their large oil resources. According to the UNCTAD (2004), MENA countries suffer from low levels of FDI flows compared to other developing countries. Nonetheless, the 2011 Arab Spring political and social revivals still dominate the economic activity as well as the short-term prospects in the MENA region. Both the Arab Spring and the international financial crisis have impeded foreign direct investment in the Mediterranean. There is little investment and capital flow in these countries because the institutions are of low and poor quality, according to the'Lucas Paradox'(Lucas, 1990; Alfaro et al., 2008). The earlier works of Jun et al. (1996) and UNCTAD (1995) that studied the effect of macroeconomic and political factors on FDI failed to account for the performance of these FDI in the Middle East and North African countries. This was because they were unable to account for the impact of economic crises and dependencies existing among countries. As a matter of fact, some researchers put forward that FDI is highly persistent, showing that the long-term effect of a variety of factors on FDI is much larger than that in

the short term (Kamaly, 2003). Others, such as Jabri et al. (2013), have also studied these effects in the MENA countries taking into account the economic dependencies between these countries and the effects of the economic crisis where the FDI evolution is affected by unclear periods. Taking into account all the reasons mentioned above, this research aims at investigating the effects of FDI factors in MENA region given the existence of economic dependencies between countries and effects of economic crisis where the evolution of the FDI is subject to unclear periods with an unsatisfactory MENA performance compared to other regions.

The aim of this dissertation is to explore the role of institutions on the flow of FDI in the MENA region during the period 1984-2011. For this reason, a much wider range of indicators for political risk will be considered in order to identify the relative importance of these indicators on FDI flows after controlling for other relevant determinants of observed changes in FDI flows.

LITERATURE REVIEW

In spite of the large amount of foreign direct investment (FDI) inflows during the 1990s, and especially after the Tequila crisis, empirical research on FDI in Middle Eastern and Northern African countries (hereafter known as MENA) still remains limited. This is principally because of the shortage in time series data and macroeconomic variables for the majority of MENA countries. FDI literature for this region falls into two categories. The first one is made up of descriptive studies that parse the scale, trend, and distribution of FDI in the MENA region. These works assume that FDI inflows into MENA countries have been scarce and unequally distributed (Eid and Paua, 2002). The second category is made up of empirical studies which examine the determining factors of FDI flows into this region.

Among these studies, Onyeiwu (2000) examines the macroeconomic factors underlying FDI outflows from the Arab countries. This study draws on data from ten Arab countries in the period 1987-1997. These data rely on the Seemingly Unrelated Regression (SUR) method on a reduced-form model using FDI outflows as its dependent variable. However, the model used is essentially a static one as a lagged dependent variable is not involved. The findings bring out that the interest, the exchange, and the lagged inflation rates bear the expected signs, but what is most interesting is that the growth rate of real GDP bears the opposite sign, showing that strong, real GDP growth is linked to more outflows. In his study, Kamaly (2002) used a dynamic panel model covering the period 1990-1999. It was noted that real lagged GDP growth and the lagged value of FDI/GDP were the only meaningful determinants of FDI inflows to the MENA region. According to Sekkat and Veganzones-Varoudakis (2004), trade and liberalization of foreign exchange are the principal factors that lure FDI flows to the region. Méon and Sekkat (2004) emphasized the impact of institutions on manufactured exports and on attracting FDI to the MENA region. Also, they showed that the bad quality of the institutions has generally a negative impact on the items mentioned above. Literature written on the determining factors of FDI in developing countries - and more particularly in the MENA region - focuses on the macroeconomic aspects of these factors, whereas few researchers analyze the institutional ones. However, Onyeiwu (2003) sheds light that most qualitative research has emphasized that the differences in the flows of FDI amongst the developing countries rely on the nature of their democracy, transparency, and good governance. However, Onyeiwu (2008) has recently stipulated that the key determinants of FDI flows are the economy openness, GDP per capita, and political risks using a sample of 61 MENA and non-MENA countries. Contrary to many previous works on the determining FDI factors in the MENA region (i.e., Onyeiwu, S., 2003; Chan et al., 2004; Hisarciklilar et al., 2006), the empirical works of Eltayeb Mohamed and Sidiropoulos (2010), which encompass a large panel of 12 MENA countries between 1975 and 2006, attempted to look at the main FDI determinants in the MENA region. The study reveals that the main determining factors of FDI inflows in the MENA region countries include the size of the host country's economy, the size of its government, its natural resources and institutional variables. In these studies, the failure to account for the effects of structural breaks during this long period can lead to a bias in other studies. On a sample of 11 countries in the MENA region during the period 1991-2007, Mina (2012) reinforces a positive influence of improvement in the investment expropriation risk in non-Gulf Cooperation Council (GCC), MENA countries, and of bilateral investment treaties (BITs) in GCC countries. In addition, some authors particularly insist on the impact of political institutions, government stability, and political risks on FDI inflows (see, for example, Jensen, 2008, and Daniele and Marani, 2006).The majority of empirical studies that analyze the impact of corruption on FDI lead to a negative effect. At first, Wei (1997, 2000) believes that uncertainty with regards to corruption has negative effects on the choice of multinational firms' locations on those chosen for

FDI. Such a result is found later in the empirical tests of Voyer and Beamish (2004), Habib and Zurawicki (2002). Another attempt to study the effect of corruption on FDI in the MENA region was fulfilled by Onyeiwu (2003). Indeed, he attempted to draw a comparison between two countries in the MENA region and other developing countries over a relatively long period (1975-1999). He concluded that corruption and bureaucratic red tape, which are measured as the ratio of public expenditure to the GDP, were of great importance for all developing countries while they were the merely significant variable for the MENA countries.

Apart from corruption, many empirical studies have looked at the relationship between fundamental democratic rights and FDI. Busse and Hefeker (2007) tried to analyze the link between the various constituents of political risk, institutions, and FDI inflow in 83 developing countries during the period 1984-2003. They also found that conflict, ethnic tensions, law and order, the government's democratic accountability, and the quality of bureaucracy are key determinants of FDI inflows. Similarly, Guerin and Manzocchi (2009) found that democracy had a positive impact on the amount of FDI flows during the period of 1992-2004. Among the recent analyses, only Li and Resnick (2003) - dealing with 53 developing countries between 1982 and 1985 - confer a great importance to the autocratic advantages compared to those democratic in terms of FDI inflows. Another institutional factor has to do with the legal and administrative sides. In fact, and most importantly, a host country's legal efficiency reassures foreign investors as it provides a reliable protection of their property rights as well as the respect of their contracts. The idea that a well-managed administration has a positive impact on the FDI inflows is empirically withstood by the majority of econometric studies analyzing this relationship (Busse and Hefeker, 2007; Bénassy-Quéré, Coupet and Mayer, 2007; Globerman and Shapiro, 2003). As a general rule, the findings of different studies on the determining factors of FDI are often mixed and inconclusive. One of the main limitations of these studies is the fact that they are often carried out over short periods and can therefore reduce the power of some unit-root and co-integration tests. Consequently, they do not consider the issue of structural breaks due to changing economic crises or reforms, etc. Another issue with these studies lies in the fact that they entirely disregard the economic ties between the different FDI host countries. In an increasingly intermingled economic world, economic relations between countries are ever stronger and can influence the attractiveness of FDI. In this context, Jabri et al. (2013) closely looked at the connection between the determining factors of foreign direct investment (FDI) and their determining factors in the MENA region during the period 1970-2010. These results imply that economic openness and the growth rate have increased FDI inflows into the MENA region. In addition, economic instability and exchange rates appear to have a negative impact on FDI inflows and therefore dissuade foreign investment.

The main purpose of this paper is to examine the effect of some institutional indicators on the entry of FDI like government stability, investment profile, and internal and external conflict. After controlling for some other relevant macroeconomic determinants, the important linkage of theses institutional factors with FDI inflows is identified. As it is best known, in the case of MENA region, the effects of institutional indicators and macroeconomic variables were not treated with more clarity and gave ambiguous results in the literature.

EMPIRICAL ANALYSIS

Data And Empirical Specification

Based on the literature review, this section explores the empirical analysis of FDI determinants in fourteen countries belonging to the MENA region (Algeria, Morocco, Tunisia, Egypt, Sudan, Saudi Arabia, Qatar, Kuwait, Lebanon, Israel, Jordan, Iran, Turkey, and United Arab Emirates). The data are provided from the World Bank, UNCTAD (United Nations Conference on Trade and Development), and ICRG (International Country Risk Guide) and cover the period 1984-2011. In this empirical framework, the FDI model is expressed in terms of institutional indicators and macroeconomic variables discussed at length in the literature.

Following the pragmatic model used by Kamaly (2007), the model defined below is estimated:

$$\left(\frac{FDI}{GDP}\right)_{it} = \alpha_i + \beta\, Opennes_{it} + \gamma\, Growrat_{it} + \delta\, Inflrat_{it} + \varphi\, \text{Exchrat}_{it} + \rho(institVar)_{it} + \varepsilon_{it} \quad (1)$$

As noted by Kamaly (2003), the FDI inflows are expressed in percentage of GDP to control the size differences between countries and do not have an explosive endogenous variable in the regression.

- *Opennes* weighs the economic openness in the country. It is defined by the sum of exports and imports in GDP. This variable is integrated in the regression to take into account the opening of the MENA region in the international economy for attracting more FDI. This variable affects positively the FDI inflows.
- *Growrat* is called Growth rate and expresses the wealth of the host market (growth rate). Widely discussed in the literature as an important factor in attracting FDI in MENA region, a positive effect of this variable on FDI inflows is expected.
- *Inflrat* is the inflation rate as measured by consumer prices index (CPI). This variable is employed in many studies as a proxy for economic instability. The expected sign of this variable is negative.
- *Exchrat* variable defines the exchange rate in the country and should have a negative impact (here each currency is expressed in dollars). When a host country's currency appreciates, it does not encourage inward investment. Similarly, when the host country's currency depreciates, its assets are very interesting and can attract foreign investment.

It is anticipated that all institutional variables or *institVar* in Equation (1) (*i.e., Investprofil, Govstabl, Internalconf, Externalconf, Rulelaw*) have a positive sign. The variables used in this study are:

- *Investprofil* represents the investment profile of the country. It assesses factors affecting the risk to investment that are not covered by other political, economic, and financial risk components.
- *Govstabl* weighs the government stability and evaluates the government's ability to carry out its declared political program(s) and its ability to stay in office.
- *Internalconf* stands for internal conflict and assesses political violence in the country and its actual or potential impact on governance.
- *Externalconf* measures the risk to the incumbent government from foreign action, ranging from non-violent external pressure (diplomatic pressures, withholding of aid, trade restrictions, territorial disputes, sanctions, etc.) to violent external pressure (cross-border conflicts to all-out war).
- *Rulelaw* assesses the "Law" element and evaluates the strength and impartiality of the legal system.

In this study, the direct effect of each institutional indicator is tested with control variables composed by the macroeconomic variables.

Panel Unit Root Tests

Before testing the long-term relationship between the variables, the stationary tests are applied with and without structural breaks. Overall, the tests without structural breaks proposed by Levin et al. (2002) and Im et al. (2003) provide mixed results. However, when considering breaks and economic dependencies between countries, the variables appear stationary. In this case, Hurlin et al. (2005) noted that the failure to account for structural breaks when they exist may create a bias in favor of non-rejection of the unit root hypothesis. The results are summarized in Table 1.

Table 1. Panel Unit Root Tests With And Without Structural Breaks

Variables	Levin, Lin & Chu (2002) Z-stat	Im, Pesaran & Shin (2003) W-stat	Carrion-i-Silvestre et al. (2005) LM(λ λ)-test	
			Without structural Breaks	With structural Breaks
FDI/PIB	2.468 (0.993)	-1.306 (0.095)	4.963 (0.000) [13.033]	7.914 (0.000) [13.096]
Δ (*FDI/PIB)*	-0.730 (0.232)	-5.915 (0.000)	-	-
Opennes	-0.507 (0.305)	2.649 (0.000)	4.511 (0.000) [17.627]	10.081 (0.000) [14.871]
Δ (*Opennes)*	-5.282 (0.000)	-	-	-
Inflrat	-67.055 (0.000)	-24.239 (0.000)	64.058 (0.000) [12.374]	4.365 (0.000) [8.692]
Growrat	-3.478 (0.000)	-7.847 (0.000)	14.926 (0.000) [12.453]	8.954 (0.000) [18.369]
Exchrat	-5.508 (0.000)	-5.612 (0.000)	11.437 (0.000) [14.594]	61.371 (0.000) [135.096]
Investprofil	-1.475 (0.07)	-3.418 (0.000)	4.796 (0.000) [13.553]	12.698 (0.000) [24.558]
Δ (*Investprofil)*	-9.068 (0.000)	-	-	-
Govstabl	-0.519 (0.308)	-1.255 (0.107)	5.004 (0.000) [13.843]	8.994 (0.000) [16.494]
Δ (*Govstabl)*	-7.901 (0.000)	-9.392 (0.000)	-	-
Externalconf	-2.222 (0.013)	-0.006 (0.497)	9.272 (0.000) [15.648]	2.006 (0.000) [3.456]
Δ (*Externalconf)*	-	-10.486 (0.497)	-	-
Internalconf	0.105 (0.542)	0.924 (0.822)	5.806 (0.000) [14.692]	16.068 (0.000) [30.628]
Δ (*Internalconf)*	-3.821 (0.000)	-4.531 (0.000)	-	-
Rulelaw	-0.100 (0.459)	0.259 (0.602)	5.247 (0.000) [16.187]	2.207 (0.000) [3.983]
Δ (*Rulelaw)*	-5.229 (0.000)	-5.970 (0.000)	-	-

Note: For the test of Carrion et al. (2005), the number of break points has been estimated using LWZ information criteria allowing for a maximum m^{max}=5 structural breaks. The long variance is estimated using the Bartlett kernel with automatic spectral window bandwidth selection as in Andrews (1991). The p-values and bootstrapped critical values are in the brackets, respectively.

Panel Co-Integration Tests

To analyze the effect of long-term macroeconomic and institutional variables on the entry of FDI in the MENA region, co-integration tests are used both with and without breaks and dependencies, without taking into account breaks and economic dependencies between countries which may lead to rejection of the co-integration between variables. The results are given in Tables 2A and B.

Table 2. Tests Of Co-Integration Panel Without Dependencies And Structural Breaks

A: Co-Integration Tests Of Pedroni (1999)

	Equation 1 (with Internal conflict)	Equation 2 (with External conflict)	Equation 3 (with Gov stability)	Equation 4 (with Rule of law)	Equation 5 (with Invest Profile)
Panel υ-Statistics	-1.123 (0.869)	-1.321 (0.906)	-1.657 ‘(0.951)	-1.744 (0.959)	-1.182 (0.881)
Panel Rho-Statistics	1.138 (0.872)	1.090 (0.862)	1.857 (0.968)	1.200 (0.885)	1.603 (0.945)
Panel PP-Statistics	-2.445 (0.000)	-2.857 (0.002)	-2.240 (0.012)	-2.298 (0.010)	-2.811 (0.002)
Panel ADF-Statistics	1.228 (0.890)	0.755 (0.775)	0.804 (0.789)	1.342 (0.910)	-0.088 (0.464)
Group Rho-Statistics	1.953 (0.974)	2.003 (0.977)	2.403 (0.991)	2.144 (0.984)	2.244 (0.987)
Group PP-Statistics	-4.263 (0.000)	-4.284 (0.000)	-3.138 (0.000)	-3.207 (0.000)	-3.605 (0.000)
Group ADF-Statistics	0.555 (0.710)	0.932 (0.824)	1.605 (0.945)	1.411 (0.920)	0.605 (0.727)

Note: The null hypothesis of Pedroni (1999, 2004) tests is no co-integration. Probability values are in brackets.

B: Co-integration Cusum Test Of Westerlund (2005)

	FMOLS	DOLS
Equation 1 (With Internal Conflict)		
Model With Constant	5.608 (0.000)	16.574 (0.000)
Model With Constant And Trend	5.553 (0.000)	18.932 (0.000)
Equation 2 (With External Conflict)		
Model With Constant	6.377 (0.000)	17.596 (0.000)
Model With Constant And Trend	5.713 (0.000)	23.190 (0.000)
Equation 3 (With Gov Stabilty)		
Model With Constant	5.727 (0.000)	14.552 (0.000)
Model With Constant And Trend	4.868 (0.000)	18.881 (0.000)
Equation 4 (With Rule Of Law)		
Model With Constant	4.813 (0.000)	21.625 (0.000)
Model With Constant And Trend	5.342 (0.000)	33.068 (0.000)
Equation 5 (With Invest Profile)		
Model With Constant	5.701 (0.000)	17.429 (0.000)
Model With Constant And Trend	5.185 (0.000)	21.087 (0.000)

Note: The null hypothesis of Cusum test is co-integration (no unit root in residuals). Probability values are in brackets.
(*) indicate the rejection of the null hypothesis at 5% level.

According to the results of Table 2, the Pedroni test gives mixed results so as to the existence of the relationship between variables' co-integration results. Therefore, the Cusum test of Westerlund (2005) is used, which is a residuals-based test of the null hypothesis of panel co-integration that allows for the mixtures of co-integrated and spurious alternatives. Again, whatever the chosen model, the test extremely rejects the co-integration between variables. As mentioned above for the unit root tests, the non-consideration of structural breaks and economic dependencies between countries may lead to the rejection of the long-term relationship between the variables.

In order to attract FDI, countries in the MENA region have undertaken some economic changes and have maintained their economic relations since 1970. As highlighted by Jabri et al. (2013), not taking into account the economic dependencies and structural changes can lead to a bias in favor of non co-integration between the variables in the model.

To this end, two-category tests will be conducted - one with dependencies and structural changes and one with economic dependencies only. The results of these tests are shown in Tables 3 and 4.

Table 3. Tests Of Panel Co-Integration With Dependencies And Structural Breaks

Co-Integration Tests Of Westerlund And Edgerton (2008)

	$Z_\tau(N)$ Value	P-value	$Z_\phi(N)$ Value	P-value
Equation 1 (With Internal Conflict)				
No Break	-1.880	0.030	-2.631	0.004
Level Break	-0.802	0.211	-1.457	0.073
Regime Shift	0.233	0.592	-1.315	0.094
Equation 2 (With External Conflict)				
No Break	-0.670	0.251	-1.339	0.090
Level Break	0.150	0.560	-0.195	0.423
Regime Shift	-1.259	0.104	-2.111	0.017
Equation 3 (With Gov Stabilty)				
No Break	-1.880	0.030	-2.631	0.004
Level Break	0.621	0.733	0.378	0.647
Regime Shift	-1.115	0.132	-2.546	0.005
Equation 4 (With Rule Of Law)				
No Break	-2.257	0.012	-3.674	0.000
Level Break	-0.157	0.438	-1.051	0.147
Regime Shift	-0.453	0.325	-1.673	0.047
Equation 5 (With Invest Profile)				
No Break	-0.690	0.245	-2.043	0.021
Level Break	0.673	0.749	-0.313	0.377
Regime Shift	0.233	0.592	-1.315	0.094

Notes: The test is implemented using the Campbell and Perron's (1991) automatic procedure to select the lag length. Three breaks are used, which are determined by grid search at the minimum of the sum of squared residuals. The P-values are for a one-sided test based on the normal distribution.

Table 4. Tests Of Panel Co-Integration With Dependencies And Without Structural Breaks

Westerlund And Edgerton Test (2007)

	Stat-LM p-value	p-value Asymptotique	p-value Bootstrap
Equation 1 (With Internal Conflict)			
Model With Constant	13.262	0.000	0.730
Model With Constant And Trend	18.108	0.000	0.965
Equation 2 (With External Conflict)			
Model With Constant	12.899	0.000	0.834
Model With Constant And Trend	18.023	0.000	0.979
Equation 3 (With Gov Stabilty)			
Model With Constant	12.868	0.000	0.766
Model With Constant And Trend	17.588	0.000	0.973
Equation 4 (With Rule Of Law)			
Model With Constant	13.205	0.000	0.799
Model With Constant And Trend	18.101	0.000	0.976
Equation 5 (With Invest Profile)			
Model With Constant	13.124	0.000	0.790
Model With Constant And Trend	18.462	0.000	0.975

Notes: The bootstrap is based on 2,000 simulations. The null hypothesis of the test is the existence of a long-term relationship between FDI and independent variables.

The results of Tables (3) and (4) clearly reflect that the co-integration is verified whatever the model considered. Furthermore, this result is also verified by the Edgerton and Westerlund test (2007). It is much more reliable than the first generation of tests that are based, for the most part, on the critical values following the normal distribution. When only the economic relations between the countries are considered, bootstrapped values show strong results in favor of a long-run equilibrium between FDI and its determinants for all equations.

After establishing the co-integration between variables, the equations will be estimated in order to see the effect of economic and institutional determinants on the entry of FDI in the MENA region. Four techniques are proposed for estimating the long-term relationship by the Ordinary Least Squares (OLS), Fully- Modified Least Squares by Dynamic Least Squares (DOLS), and Seemingly unrelated regressions (SUR). The latter technique proposed by Zellner (1962) takes into account the existing interdependencies between countries. The results of the estimates are presented in Table 5 A and B.

Table 5A. Panel Long-Run Estimators

	FMOLS	DOLS	SUR	OLS (Fixed Effects)
Equation 1 (With Investprofil)				
Growrat	0.007	0.170	0.009	0.008
	(0.673)	(0.003)***	(0.17)	(0.58)
Opennes	0.047	-0.019	-0.002	0.102
	(0.09)*	(0.80)	(0.04)**	(0.004)***
Inflrat	-0.007	-0.029	0.021	-0.005
	(0.02)**	(0.000)***	(0.006)***	(0.06)*
Exchrat	-0.0005	-0.032	0.001	0.001
	(0.89)	(0.02)**	(0.44)	(0.819)
Investprofil	0.802	0.781	0.364	0.643
	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Hausman Test: P-value				**0.05**
Equation 2 (With Internal Conflict)				
Growrat	0.021	0.332	0.011	0.016
	(0.52)	(0.000)***	(0.04)**	(0.36)
Opennes	0.189	0.265	0.038	0.214
	(0.003)	(0.002)***	(0.000)***	(0.000)***
Inflrat	-0.012	-0.055	-0.005	-0.008
	(0.03)	(0.000)***	(0.000)***	(0.009)***
Exchrat	0.009	-0.038	0.002	0.0079
	(0.44)	(0.008)***	(0.03)**	(0.13)
Internalconf	0.367	-0.275	0.105	0.317
	(0.002)***	(0.03)**	(0.000)***	(0.000)***
Hausman Test: P-value				**0.01**
Equation 3 (With External Conflict)				
Growrat	0.0140	0.101	0.012	0.013
	(0.68)	(0.026)**	(0.02)**	(0.44)
Opennes	0.189	0.226	0.036	0.208
	(0.004)***	(0.000)***	(0.000)***	(0.000)***
Inflrat	-0.013	-0.015	-0.005	-0.009
	(0.019)***	(0.012)***	(0.000)***	(0.002)***
Exchrat	0.021	0.016	0.003	0.010
	(0.11)	(0.14)	(0.009)***	(0.05)**
Externalconf	0.410	0.105	0.099	0.300
	(0.001)***	(0.40)	(0.000)***	(0.000)***
Hausman Test : P-value				**0.01**

Table 5B. Panel Long-Run Estimators (Suite)

	FMOLS	DOLS	SUR	OLS (Fixed Effects)
Equation 4 (With Government Stabilty)				
Growrat	0.008 (0.78)	0.164 (0.000)***	0.006 (0.29)	0.007 (0.66)
Opennes	0.139 (0.02)**	0.292 (0.000)***	0.036 (0.000)***	0.180 (0.000)***
Inflrat	-0.011 (0.03)**	-0.035 (0.000)***	-0.003 (0.002)***	-0.0080 (0.007)***
Exchrat	0.006 (0.59)	0.026 (0.019)***	-0.0003 (0.72)	0.007 (0.17)
Govstabl	0.548 (0.000)***	0.584 (0.000)***	0.242 (0.000)***	0.465 (0.000)***
Hausman Test: P-value				**0.03**
Equation 5 (With Rule Of Law)				
Growrat	0.026 (0.43)	-0.056 (0.65)	0.014 (0.005)***	0.020 (0.24)
Opennes	0.135 (0.04)**	0.098 (0.45)	0.030 (0.000)***	0.177 (0.000)***
Inflrat	-0.0137 (0.017)***	-0.038 (0.000)***	-0.005 (0.000)***	-0.009 (0.004)***
Exchrat	0.011 (0.37)	-0.037 (0.07)**	0.001 (0.08)*	0.008 (0.10)*
Rulelaw	0.808 (0.001)***	1.138 (0.000)***	0.263 (0.000)***	0.712 (0.000)***
Hausman Test: P-value				**0.000**

In general, all the estimated coefficients carry the expected signs for all equations. For three equations (2, 3 and 5), the method SUR seems to give strong results for the impact of macroeconomic and institutional variables on FDI, except for exchange rate when DOLS give a correct sign. For the remaining two equations (1 and 4), both methods DOLS and SUR show a strong relationship between variables with their expected signs.

CONCLUSION

This study tempted to analyze the effects of macroeconomic determinants and institutional indicators on the entry of FDI in the MENA region during the period 1984-2011. To achieve this goal, a co-integrations relation is estimated by considering the effects of macroeconomic and institutional variables on the entry of FDI. The techniques proposed in this study, in the case of FDI determinants, were ignored in the literature. The results seem to confirm the findings in a recent paper dedicated to the macroeconomic determinants of FDI (Jabri et al., 2013). Moreover, new results emerge from this study on the impact of institutional variables on FDI inflows by considering the interdependencies between countries and structural changes. This study shows that institutional indicators are positively related to FDI. Several political implications can be drawn from this study. First, the countries of the MENA region need to better control their economic policies to succeed their integration into the international economy and pursue a policy of FDI attractiveness. In addition, these politics have to be part of a long-term promotion of the institutions in order to ensure internal and external political stability for foreign investors.

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